

WHAT IS CLAIMED IS:

1. A sliding door structure for a vehicle having a door opening extending from a side body panel of a vehicle body to a roof panel of the vehicle body, said sliding door structure comprising:

a sliding door having a side portion in conformity in configuration with a side opening portion of the door opening and a roof portion in conformity in configuration with a roof opening portion of the door opening, said sliding door being adapted to be slidably mounted on one side of a vehicle body for sliding movement in a lengthwise direction of the vehicle body between a closed position in said door opening and an open position wherein said sliding door extends along an outer surface of said side body panel to fully expose said door opening; and

guide means for guiding said sliding movement of said sliding door, said guide means putting said roof portion of said sliding door substantially flush with said roof panel in said closed position and causing said sliding door to shift and swing outward in a transverse direction of the vehicle body so that said roof portion of said sliding door completely comes out of said roof opening portion of the door opening and to travel rearward in said lengthwise direction at the beginning of opening operation of said sliding door from said closed position toward said

closed position.

2. The sliding door structure as defined in claim 1, wherein said guide means causes said outward swinging and parallel shifting movement of said sliding door simultaneously with said rearward sliding movement of said sliding door.

3. The sliding door structure as defined in claim 2, wherein said sliding door is adapted to be slidably mounted to said vehicle body adjacently to a front door hinged to said vehicle body at a front end of said front door so as to open and close a front door opening in said side body panel, said sliding door being provided with sealing means secured to a forward end of said sliding door, said sealing means being brought into abutment against a rearward end of said front door in said front door opening so as to overlap an inner rear edge of said front door when said sliding door is completely put in said door opening.

4. The sliding door structure as defined in claim 1, wherein said sliding door is put inclined inward in said transverse direction in said door opening, and said guide means causes said sliding door to swing and shift outward in parallel.

5. The sliding door structure as defined in claim 1, wherein said guide means comprises an upper slide guide assembly comprising a rear guide rail secured to a middle portion of said vehicle body in a vertical direction and a front slider slidably mounted for slide movement to said rear guide rail, said front slider being guided by and sliding to overlap said rear guide rail when said sliding door travels in said lengthwise direction, a swinging mechanism operationally connected between said front slider and said sliding door, said swinging mechanism causing said sliding door to swing laterally in said transverse direction when said sliding door travels in said lengthwise direction, and a base slide guide rail secured to said vehicle body and connected for slide movement to said sliding door, said base slide guide rail causing said sliding door to shift laterally in said transverse direction when said sliding door travels in said lengthwise direction.

6. The sliding door structure as defined in claim 5, wherein said swinging mechanism comprises a parallel link mechanism.

7. The sliding door structure as defined in claim 6, wherein said swinging

mechanism is provided with means for absorbing an inclination of said sliding door due to a difference between a distance of said shift movement and a distance of said swing movement.

8. The sliding door structure as defined in claim 1, wherein said upper slide guide assembly is disposed inside said vehicle body.

9. The sliding door structure as defined in claim 8, wherein said upper slide guide assembly juts out into a passenger compartment of said vehicle body so as to provide a flat surface serving as an arm rest.

10. The sliding door structure as defined in claim 9, wherein said upper slide guide assembly has a nested construction comprising a rear guide rail extending in said lengthwise direction and secured to said vehicle body and a front slider slidably mounted for slide movement to said rear guide rail and being put alongside said sliding door in said door opening, said front slider being guided by and sliding to overlap said rear guide rail when said sliding door travels in said lengthwise direction to open said door opening.

11. The sliding door structure as defined in claim 10, and further comprising an arm rest fixedly attached to said sliding door and jutting out into a passenger compartment of said vehicle so as to overhang above said front slider when said sliding door is in said door opening and to draw laterally away from said front slider 16F when the sliding door 5 swings and shifts outward in a transverse direction.

12. The sliding door structure as defined in claim 11, and further comprising a rear arm rest fixedly attached to said side body panel 1 and jutting out into a passenger compartment of said vehicle, said rear arm rest being so shaped as to conceal said rear guide rail 16R.

13. The sliding door structure as defined in claim 12, and further comprising a front arm rest fixedly attached to said front slider, wherein said rear arm rest conceals said front arm rest attached to said front slider when said sliding door is in said open position.

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